

# **U.S. Department of Energy Testing Generates 56.12% Pressure Drop Improvement for STWA's AOT**

## **U.S. DOE Testing Confirms Reduced Friction Within the Pipeline When Company's New Oil Pipeline Technology Is Deployed**

SANTA BARBARA, CA -- (Marketwire) -- 05/31/12 -- [STWA, Inc.](#) (OTCBB: ZERO) ("STWA" or the "Company"), a developer of [applied solutions](#) for oil and fuel delivery systems in the multi-billion dollar oil pipeline and diesel engine markets, announced today the United States Department of Energy RMOTC confirmed that STWA's Applied Oil Technology™ (AOT™) reduced the internal friction (pressure drop per mile) within the pipeline by over 56%.

The recent test results were generated during 24-hour testing of the STWA AOT™ 1.2V at the United States Department of Energy RMOTC. The technical objective to be achieved by the Company's industrial technology is to improve oil pipeline transmission flow rates while reducing the energy-intensity required, per mile, per ton. Energy-intensity is directly related to fluid friction within the pipeline. The Company's technology is designed to reduce this friction via viscosity reduction.

During the testing, the AOT™ 1.2V Viscosity Reduction System was able to achieve an improvement of 56.12% over untreated oil at the same temperature. Pressure drop per mile was reduced by 16.626 psi/mi from 29.624 psi/mi to 12.997 psi/mi.

One of the greatest challenges facing the international pipeline industry is known as pressure drop. Pressure drop is the term used to describe the decrease in pressure from one point to another within a pipeline resulting from frictional forces within the fluid as it is transported through the pipeline from point A to point B. The frictional forces that cause the decrease in pressure from point A to point B are a direct result of the fluid's resistance to flow. These frictional forces are caused by high internal roughness of the pipe, high velocities of fluid flow, and/or viscosity. The reduction in one of these parameters will result in a reduction of the pressure drop per mile. Pressure drop can be calculated by the Reynolds # and the relative roughness of the pipeline.

Pipelines operate in a very simple manner, directly related to pressure drop. Pipeline pumping stations, located at regular intervals in every pipeline around the world, simply boost the pressure of the oil at the beginning of the line to the necessary pressure to overcome the friction exerted inside the pipeline to transport the fluid from point A to point B. By reducing the friction within the pipeline, it is possible to use less pressure to cover the same distance. This, in turn reduces the energy consumed by each pumping station along the pipeline, and improves the pipeline's margin of safety below its maximum allowable operating pressure (MAOP). The Company believes that the pressure drop reduction as a result of viscosity reduction is of interest to the pipeline industry.

STWA's Applied Oil Technology™ (AOT™) is a new technology developed for new pipeline construction and existing pipeline infrastructure. AOT™ is a standalone crude oil viscosity reduction system, compatible with existing and new construction for installation at pipeline pump stations to reduce the energy intensity per ton, per mile. According to the Company's research and the U.S. Department of Transportation, there are [160,868 miles](#) of petroleum pipelines throughout the United States, with another 11,000+ miles slated for development through 2020 worldwide.

"We believe at STWA that the international pipeline industry can benefit greatly from the reduction of crude oil viscosity," said Mr. Cecil Bond Kyte, STWA's CEO. "By reducing the parasitic loss inherent to every pipeline in the world, we believe that the industry can benefit from better efficiency, better flow rates, and better operating pressures. All of these benefits translate into greater profitability and greater margins of safety for everyone."

#### *About the US DOE Test*

The technology, currently in testing with the United States Department of Energy, is directed at improving the efficiency and throughput capacity of conventional energy infrastructure. The research was co-funded by STWA, Inc. and the [Pipeline Research Council International \(PRCI\)](#), the preeminent global collaborative research development organization of, by, and for the energy pipeline industry. Work was directed by Clarke Turner, Brian Haight, Wes Lintz, Wes Riesland, George Hughes and Jeanette Buelt, all of the United States Department of Energy Rocky Mountain Oilfield Testing Center. To view the U.S. DOE's report on these test results please visit: <http://www.rmotc.doe.gov/testreports.html>

#### *About STWA, Inc.*

STWA, Inc. develops and commercializes energy efficiency technologies that assist in meeting increasing global energy demands, improving the economics of oil extraction and transport, and reducing greenhouse gas emissions. The Company's intellectual property portfolio includes 24 domestic and international patents and patents pending, which have been developed in conjunction with and exclusively licensed from Temple University. STWA's technologies include Applied Oil Technology™ (AOT™) which is designed to improve oil flow through pipelines. AOT™ has been proven in U.S. Department of Energy tests to increase the energy efficiency of oil pipeline pump stations. ELEKTRA™ improves diesel engine efficiency for industrial diesel engines, as well as diesel-powered trucks, trains, marine vessels, military fleets and jet turbines. More information including a company Fact Sheet, logos and media articles are available at: <http://www.stwa.com>.

#### *Safe Harbor Statement*

This press release contains information that constitutes forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Any such forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from any future results described within the forward-looking statements. Risk factors that could contribute to such differences include those matters more fully disclosed in the Company's reports filed with the Securities and Exchange Commission. The forward-looking information provided herein represents the Company's estimates as of the date of the press release, and subsequent events and developments may cause the Company's estimates to change. The Company specifically disclaims any obligation to update the forward-looking information in the future. Therefore, this forward-looking information should not be relied upon as representing the Company's estimates of its

future financial performance as of any date subsequent to the date of this press release.

Image Available: [http://www2.marketwire.com/mw/frame\\_mw?attachid=1998896](http://www2.marketwire.com/mw/frame_mw?attachid=1998896)

Image Available: [http://www2.marketwire.com/mw/frame\\_mw?attachid=1998893](http://www2.marketwire.com/mw/frame_mw?attachid=1998893)

[Add to Digg](#) [Bookmark with del.icio.us](#) [Add to Newsvine](#)

Investor Relations Contacts:

Mr. Andrew Haag

Managing Partner

IRTH Communications, LLC

Tel: +1-866-976-IRTH (4784)

E-Mail: Email Contact

Website: [www.irthcommunications.com](http://www.irthcommunications.com)

Company Website: [www.stwa.com](http://www.stwa.com)

Mr. Jeremy Roe

Managing Partner

Integra Consulting Group, LLC

Tel: +1-925-262-8305

E-Mail: Email Contact

Website: [www.integraconsultinggroup.com](http://www.integraconsultinggroup.com)

Source: Save The World Air, Inc.